SECRET

IEG/PHD-163/70
2 December 1970

MEMORANDUM FOR THE RECORD

25X1 SUBJECT: Trip to [redacted], for Acceptance Testing the Ultra High Precision Stereocomparator

1. On 9 November 1970, I went to [redacted] 25X1
25X1 to participate in the acceptance testing for the Ultra High Precision Stereocomparator. At the plant I met with [redacted] 25X1
25X1 Project Manager, [redacted] Project Engineers, and
25X1 [redacted] Project Technicians.

2. Highlights of the acceptance test included: (1) trackball and joystick sensitivity tests; (2) automatic illumination film/density change; and (3) optical resolution of 1200 lines/m.m. at 200x magnification.

3. From 9 November to 13 November I assisted in various potentiometer calibrations, i.e. zoom, image rotation, anamorphic ratio, and anamorphic rotation. A vignetting problem was also eliminated at 25x magnification in the high magnification range. These calibrations were done using a digital voltmeter and the calibration graphs from [redacted] They were done 25X1
in preparation for the acceptance test to begin on 17 November 1970. During this time I became familiar with the various instrument sub units and operating modes associated with the HPSC.

4. On 12 November 1970 I met with [redacted] the HPSC Project 25X1
Technical Director to discuss with him current mensuration programs and techniques used in PHD.

5. A daily meeting at 1600 hours was held to determine the progress of the Stereocomparator and to note problems or suggestions.

25X1 6. On 17 November 1970, [redacted], TSG/RED/ESD and I reviewed the acceptance test plan schedule. [redacted] designed the test to begin 25X1
17 November 1970 at 1600 hours and to end on 25 November 1970 at 2000 hours. It was felt that the test would not take this long, but, excess time was allotted to each portion of the test because electronic, optical or mechanical failures may occur. After reviewing the plan, Messrs. [redacted] 25X1
25X1 [redacted] TSG/RED/SDB, [redacted] and myself met with [redacted] to discuss 25X1

SECRET

25X1 Subject: Trip to [redacted], for Acceptance Testing the Ultra High Precision Stereocomparator

the test plan outline. The portions of the test that required computer control was postponed, because the programs were still being debugged. Part I of the test was begun about 1600 hours. Test portions completed were; console desk and panel operation, rack no. 4 - right side (air pressure gauges and flow meters), and trackball sensitivity (low speed setting - trackball fine). I checked the mensuration package sent to
25X1 [redacted] on 14 October 1970 and confirmed it to be complete.

7. On 18 November 1970 test portions completed were; measurement repeatability, film clamping, color filter switching system, main anamorph system, main zoom system, and right side optical resolution.

8. On 19 November 1970 test portions completed were; stage drive speed (joystick under computer control), film density accommodation, fine focusing and image wander, left side optical resolution, and trackball sensitivity (high speed setting - trackball course). Part I of the acceptance test was completed about 2200. Several minor problems were noted:

a. the right stage film hold-down did not meet specifications, however, the 20 second time limit to pull down the film was felt to be an unrealistic number. The time actually needed was about 1 minute;

b. The left reticle spot does not remain circular when anamorphism is introduced. This problem will be corrected;

c. The image wander test was not a valid test. This test will be revised and completed in December during the operator training session;

d. The push button control panel was very hot due to the large number of lights. A cooling system is currently being designed to remedy this problem;

e. A noticeable instrument movement or oscillation occurs when the stages are moved to their extreme position in the y-direction. A dash pot assembly has been designed and manufactured which will be installed shortly.

25X1 Subject: Trip to [redacted], for Acceptance Testing the Ultra High Precision Stereocomparator

9. Part II of the HPSC acceptance test is scheduled to begin 7 December 1970. Portions not completed from Part I will be done initially. Part II consists of HPSC operator/programmer training using system photography where a production environment will be simulated. HPSC operators for this test will be [redacted] IEG/PHD/AB and myself. HPSC Programmers will be [redacted] EG/PHD/AB and [redacted] PSG/AID/AMB. 25X1

25X1

25X1

10. In summary of the trip to [redacted], I became familiar with the various instrument sub units and operating modes associated with the HPSC. Highlights of the acceptance test, Part I included: (1) trackball and joystick sensitivity tests; (2) automatic illumination/film density change; and (3) optical resolution of 1200 lines/m.m. at 200x magnification. 25X1

[redacted] 25X1
Analysis Branch
PHD/IEG/NPIC

Distribution:
Orig & 1 - NPIC/IEG/PHD
1 - NPIC/IEG/OD
1 - NPIC/TSG/RED attn: [redacted] 25X1

CENTER ROUTING SLIP

FROM			DATE
	IEG/DDI		2 Dec 70

TO	INITIALS	DATE	REMARKS
DIRECTOR			
DEP/DIRECTOR			
EXEC/DIRECTOR			
SPECIAL ASST			
ASST TO DIR			
HISTORIAN			
CH/PPBS			
DEP CH/PPBS			
EXO/PPBS			
CH[redacted]S			
DEP CH/SS			
SC & P			
RECORDS MGT			
PERSONNEL			
LOGISTICS			
TRAINING			
SECURITY			
FINANCE			
CH/IEG			
DEP CH/IEG			
EX[redacted]G			
CH/PSG			
DEP CH PSG			
EXO PSG			
CH/TSG			
DEP CH/TSG			
EXO/TSG			
TSG/RED	✓		
DIR/IAS/DDI			
CH/DIAXX-4			
CH/DIAAP-9			
CH/SPAD			

25X1

IP FORM 30 (7 70) OBSOLETE PREVIOUS EDITIONS